What is claimed is:

1. A method for manufacturing a capacitor of a semiconductor device having a dielectric film of an ONO structure, the method comprising the steps of:

forming an interlayer insulating film on a semiconductor substrate;

forming a storage electrode comprising a doped polysilicon on the interlayer insulating film;

forming a first oxide film on the storage electrode;

subjecting the first oxide film to a thermal treatment in an atmosphere comprising an n-type impurity to implant the impurity into the first oxide film;

forming a nitride film on the first oxide film, whereby the impurity in the first oxide film is diffused into the nitride film;

forming a second oxide film on the nitride film; and

forming a plate electrode on the second oxide film.

2. The method according to claim 1, wherein the doped polysilicon is doped with an n-type impurity having a concentration of 1E20 to 5E21/cm^3.

3. The method according to claim 1, wherein the step of forming the storage electrode further comprises removing

a natural oxide film on the storage electrode.

4. The method according to claim 1, wherein the first oxide layer has a thickness ranging from 5 to 25 Å.

5. The method according to claim 1, wherein the step of forming the first oxide film comprises a wet oxidation process wherein the semiconductor substrate is dipped in a solution comprising NH_4OH and H_2O_2 having a temperature ranging from room temperature to 80°C for 1 to 10 minutes.

6. The method according to claim 1, wherein the step of forming the first oxide film comprises a dry oxidation process wherein the semiconductor substrate is subjected to a thermal treatment in an atmosphere containing oxygen selected from the group of O_2, H_2O, N_2O, NO, O_3 and combinations thereof at a temperature ranging from 500 to 800°C under a pressure ranging from 0.05 to 760 Torr for 3 to 120 minutes.

7. The method according to claim 1, wherein the gas containing an n-type impurity is selected from the group consisting of PH_3, AsH_3 and combinations thereof, and the thermal treatment is performed at a temperature ranging from 500 to 800°C under a pressure ranging from 0.05 to 760 Torr

for 3 to 180 minutes.

8. The method according to claim 7, wherein the gas containing an n-type impurity further comprises an inert gas.

9. The method according to claim 1, wherein the nitride film has a thickness ranging from 30 to 60 Å.

10. The method according to claim 1, wherein the step of forming the nitride film is a process selected from the group of: (a) a CVD method performed in a mixed gas atmosphere comprising SiH_4 and NH_3 or a mixed gas atmosphere comprising SiH_2Cl_2 and NH_3 at a temperature ranging from 600 to 800°C under a pressure ranging from 0.05 to 2 Torr; (b) nitriding the first oxide film in a gas atmosphere of NH_3, a mixed gas atmosphere of NH_3 and Ar or a mixed gas atmosphere of NH_3 and N_2 at a temperature ranging from 600 to 800°C under a pressure ranging from 0.05 to 760 Torr; and (c) combinations thereof.

11. The method according to claim 1, wherein the step of forming the second oxide film comprises a thermal process performed in an atmosphere containing oxygen at a temperature ranging from 650 to 800°C under a pressure ranging from 0.05 to 760 Torr for 3 to 120 minutes.

12. A method for removing a charge depletion region caused by an impurity within a capacitor of a semiconductor device introduced during formation of an oxide film during fabrication of the semiconductor device, wherein the formation of the oxide film includes a thermal treatment at a first temperature, comprising:

thermally treating the semiconductor device while forming a nitride layer at a second temperature that is greater than the first temperature.

13. The method according to claim 12, wherein the second temperature ranges from 500 to 800°C.

14. The method according to claim 12, wherein the nitride layer is formed via chemical vapor deposition.

15. The method according to claim 12, wherein the nitride layer is formed by nitriding the oxide film in a gas atmosphere comprising NH_3.

16. The method according to claim 12, wherein the nitride layer is formed by a combination of chemical vapor deposition and nitriding the oxide film in a gas atmosphere comprising NH_3.